

PHARMACEUTICAL COMBINATION OF G-CSF AND PLGF USEFUL FOR BLOOD STEM CELL MOBILIZATION

**FIELD OF THE INVENTION**

This invention regards a combination of biologically active molecules for use in the mobilization of blood stem cells in a patient or subject in need thereof. More specifically, the invention provides a combination of G-CSF and PlGF particularly effective in stimulating the mobilization of peripheral blood progenitor cells (PBPCs) thereby increasing feasibility and efficacy of organ or cell transplantation and of chemo-radiotherapy protocols in tumor patients.

**BACKGROUND OF THE INVENTION**

Autologous PBPCs have significantly increased indications, feasibility and efficacy of high-dose chemo-radiotherapy and autologous stem cell transplantation (SCT)<sup>1,2</sup> in patients with non-Hodgkin lymphoma (NHL),<sup>3</sup> relapsed Hodgkin lymphoma (HL),<sup>4</sup> as well as multiple myeloma (MM).<sup>5</sup>

Allogeneic PBPCs represent the preferred stem cell source for HLA-matched SCT and the unique source for HLA-mismatched allografts<sup>6,7,8,9,10,11</sup> which is a potentially curative therapy for patients with high-risk leukemias lacking an HLA-matched related or unrelated donor, i.e., approximately 40% of the global population of patients who may benefit of allogeneic transplantation.

Protocols used to mobilize autologous PBPCs in cancer patients include the use of myeloid growth factors alone or during recovery from cytotoxic chemotherapy, with the latter approach allowing optimal PBPC mobilization<sup>12,13,14</sup>. Mobilization of allogeneic PBPCs from healthy donors is usually achieved by short courses of recombinant human granulocyte colony-stimulating factor (rhG-CSF) in doses ranging from 10 to